

WHAT IS CLAIMED IS:

1. A connector, comprising:
 - a housing (20) connectable with a mating housing (10);
 - a resiliently displaceable lock arm (22) on the housing (20) to lock the housing (20) and the mating housing (10) in a properly connected state; and
 - a detector (40) engageable with an engaging portion (11) of the mating housing (10) for generating rotation of the detector (40) from a mount position at an intermediate stage of connection of the two housings (20, 10) to a retracted position when the two housings (20, 10) are connected properly, the detector (40) further being movable along a moving direction (PD) substantially adjacent the housing (20) from the retracted position (FIG. 10) where resilient displacement of the lock arm (22) is permitted to an advanced position (FIG. 12) where resilient displacement of the lock arm (22) is prevented to detect whether the housings (20, 10) are connected properly.
2. The connector of claim 1, wherein the housing (20) comprises at least one restricting means (36; 48) for preventing the detector (40) from being pushed in the moving direction (PD) until reaching the retracted position.
3. The connector of claim 2, wherein the housing (20) is fittable into a receptacle (11) in the mating housing (10) and an opening edge of the receptacle (11) defining the engageable portion.
4. The connector of claim 2, wherein the detector (40) comprises a restricting portion (53) located in a deformation space for the lock arm (22), when the detector (40) is in the advanced position to prevent displacement of the lock arm (22).

5. The connector of claim 2, wherein rotation preventing means (54, 33; 55, 35) are provided for preventing a rotation of the detector (40) when the detector (40) is moved between the retracted and advanced positions.

6. The connector of claim 2, wherein locking means (38; 51) are provided for locking the detector (40) in the advanced position.

7. A connector assembly comprising the connector of claim 1 and a mating connector connectable therewith.

8. A method for connecting a connector with a mating connector, comprising the following steps:

connecting a housing (20) of the connector with a mating housing (10) of the mating connector while simultaneously engaging a detector (40) on the housing (20) with an engaging portion (11) of the mating housing (10) for rotating the detector (40) from a mount position at an intermediate stage of connection of the two housings (20, 10) to a retracted position when the housings (20, 10) are in a properly connected state;

engaging a lock arm (22) of the housing (20) with the mating housing (10) to lock the housings (20, 10) in the properly connected state; and

moving the detector (40) along a pushing direction (PD) from the retracted position (FIG. 10) to an advanced position (FIG. 12) between the housing (20) and the lock arm (22) for detecting whether the two housings (20, 10) are in the properly connected state.

9. The method of claim 8, further comprising preventing the detector (40) from being pushed in the pushing direction (PD) until the detector (40) is rotated to the retracted position.

10. The method of claim 8, wherein the step of connecting the housing (20) with a mating housing (10) comprises fitting the housing (20) into a receptacle (11) in the mating housing (10) and wherein the step of engaging the detector (40) with an engaging portion (11) of the mating housing (10) comprises engaging the detector (40) with an opening edge of the receptacle (11).

11. The method of claim 8, further comprising preventing rotation of the detector (40) by rotation preventing means (54, 33; 55, 35) when the detector (40) is moved between the retracted position and the advanced position.

12. The method of claim 8, further comprising locking the detector (40) in the advanced position.